

3UF18 Current Transformers for Overload Protection

Climatic environmental conditions	
Ambient temperature in °C	
<ul style="list-style-type: none"> • Operation 	-25 ... +60
<ul style="list-style-type: none"> • Storage/transport 	-40 ... +85
Temperature change in °C/h	
<ul style="list-style-type: none"> • Operation 	max. 10
<ul style="list-style-type: none"> • Storage/transport 	max. 20
Relative humidity in %	15 ... 95 (indoor, acc. to IEC 60721-3, no condensation)
Air pressure in hPa	
<ul style="list-style-type: none"> • Operation 	860 ... 1060
<ul style="list-style-type: none"> • Storage/transport 	650 ... 1060
Contaminants in ppm	
<ul style="list-style-type: none"> • SO₂ 	0.5 (relative humidity ≤ 60 %, no condensation)
<ul style="list-style-type: none"> • H₂S 	0.1 (relative humidity ≤ 60 %, no condensation)
Mechanical environmental conditions	
Vibrations in Hz (acc. to IEC 60068-2-6)	10 ... 57 (for constant amplitude 0.15 mm) 57 ... 150 (for constant acceleration 2 g)

Climatic environmental conditions			
Shock (to IEC 60068-2-27)	12 shocks (half sine 15 g/11 ms)		
Requirements acc. to IEC, DIN and VDE			
Degree of protection (to IEC 60529)	IP20		
Rated insulation voltage in V	690/1000 (type-dependent)		
Rating of the insulation in V (to UL/CSA)	600		
Trip class (acc. to IEC 60947-4-1)	Suitable from CLASS 5 to CLASS 30		
Power loss per conducting path of the transformers	Operating range	For setting ...	
		to the lower limit	to the upper limit
	A	mW (mVA)	mW (mVA)
• 3UF1 845	12.5 ... 50	33 (38)	570 (650)
• 3UF1 848	25 ... 100	110 (120)	1700 (1900)
• 3UF1 850	32 ... 130	135 (150)	2400 (2700)
• 3UF1 852	50 ... 200	170 (190)	2600 (2900)
• 3UF1 856	100 ... 400	450 (500)	6500 (7000)
• 3UF1 857	125 ... 500	850 (940)	13000 (15000)
• 3UF1 868-3F	160 ... 630	900 (1000)	17000 (19000)
• 3UF1 868-3G	205 ... 820	1400 (1600)	22000 (25000)
Connection cross-sections	Current transformers		
	On secondary side	On primary side	

Climatic environmental conditions (one or two conductors connectable)										
		3UF1 845	3UF1 848 1)	3UF1 850 1)	3UF1 852	3UF1 856 3UF1 857	3UF1 868-3FA00 2)	3UF1 868-3GA00 2)		
• Terminal screw	M 3.5	Connection data see 3RT1 Contactors	Connection data see 3RT Contactors	Connection data see 3RT Contactors	M 8	M 10	M 10	M 12		
• Solid in mm ²	2 × 1.5 ... 2.5									
• Stranded in mm ²	2 × 1.5 ... 2.5									
• Finely stranded without end sleeve in mm ²										
• Finely stranded with end sleeve in mm ²	2 × 1.5									
• Finely stranded with cable lug in mm ²							35 ... 95	50 ... 240 3)	50 ... 240	185 ... 240
• Stranded with cable lug in mm ²							50 ... 120	70 ... 240 3)	70 ... 240	185 ... 240
• Connecting bars in mm							20 × 4	25 × 6.30 × 6	30 × 5	50 × 5
• Tightening torque in Nm	0.8 ... 1.4						10 ... 14	14 ... 24	14 ... 24	14 ... 24
• Tightening torque in lb.in	7 ... 12						89 ... 124	124 ... 210	124 ... 210	124 ... 210

1) With or without box terminal.

2) Conductor cross-sections for box terminals, see 3TF6 8 and 3TF6 9 contactors in section Contactors and Contactor Assemblies.

3) With max. conductor cross-section, a terminal cover for maintaining the phase spacing is required.

Short-circuit protection with fuses for motor feeders for short-circuit currents up to 50 kA at 690 V³⁾, 50/60 Hz

Overload relay	Contactor	Rated operating current I_e AC-3 in A with 400 V and Class ...			Type of coordination ²⁾						
		20	25	30	1		2				
					Fuse links in A ¹⁾						
5 and 10	15				NH, Type 3NA DIAZED, Type 5SB NEOZED Type 5SE gL/gG	NH TYPE 3ND aM	British Standards fuses BS88				
Operating range 0.25 to 2.5 A											
3UF1 843-1BA00	3RT1 015	2.5	2.5	2.5	2.5	2.5	25	10	--	--	
Operating range 1.25 to 12.5 A											
3UF1 843-1AA00	3RT1 015	7	7	7	7	7	25	10	--	--	
	3RT1 016	9	9	9	9	9	25	10	--	--	
	3RT1 017	12	11	10	9.5	9	25	10	--	--	
	3RT1 024	12	12	12	12	12	35	16	20	35	
	3RT1 025	12.5	12.5	12.5	12.5	12.5	35	16	20	35	
Operating range 2.5 to 25 A											
3UF1	3RT1 015	7	7	7	7	7	25	10	--	--	

Overload relay	Contactor	Rated operating current I_e AC-3 in A with 400 V and Class ...					Type of coordination ²⁾			
843-2BA00	3RT1 016	9	9	9	9	9	25	10	--	--
	3RT1 017	12	11	10	9.5	9	25	10	--	--
	3RT1 024	12	12	12	12	12	63	25	20	35
	3RT1 025	17	17	16	15	14	63	25	20	35
	3RT1 026	25	18	16	15	14	63	25	35	50
	3RT1 034	--	25	22.3	20.3	19.1	63	25	--	--
	3RT1 035	--	--	25	25	25	63	25	--	--
Operating range 12.5 to 50 A										
3UF1 845-2CA00	3RT1 025	17	17	16	15	14	63	25	20	35
	3RT1 026	25	18	16	15	14	100	35	35	50
	3RT1 034	32	25.5	22.3	20.3	19.1	100	63	--	--
	3RT1 035	40	33	29.4	28	26.5	100	63	--	--
	3RT1 036	50	38.5	32.7	29.4	26.5	100	80	--	--
	3RT1 044	--	50	49	45	41.7	100	80	--	--
	3RT1 045	--	--	50	47	45	100	80	--	--
	3RT1 046	--	--	--	50	50	100	80	--	--
Operating range 16 to 65 A										
3UF1	3RT1 034	32	25.5	22.3	20.3	19.1	125	63	--	--
	3RT1 035	40	33	29.4	28	26.5	125	63	--	--
	3RT1 036	50	38.5	32.7	29.4	26.5	160	80	--	--

Overload relay	Contactor	Rated operating current I_e AC-3 in A with 400 V and Class ...					Type of coordination ²⁾			
200 A										
3UF1 852-3BA00	3RT1 054	115	93	82	75	69	355	224	160	200
	3RT1 055	150	122	107	98	90	355	224	160	200
	3RT1 056	185	150	131	120	111	355	224	160	200
	3RT1 064	200	182	160	146	135	355	224	160	200
	3RT1 065	--	200	188	172	159	355	224	160	200
	3RT1 066	--	--	200	195	180	355	224	160	200
	3RT1 075	--	--	--	200	200	355	224	160	200
Operating range 63 to 250 A										
3UF1 854-3CA00	3RT1 056	185	150	131	120	111	355	250	160	200
	3RT1 064	225	182	160	146	135	400	250	250	355
	3RT1 065	250	215	188	172	159	500	400	315	355
	3RT1 066	--	243	213	195	180	500	400	315	355
	3RT1 075	--	250	250	250	240	500	400	400	355
	3RT1 076	--	--	--	--	250	500	400	400	355
Operating range 100 to 400 A										
3UF1	3RT1 065	265	215	188	172	159	500	400	315	400
	3RT1 066	300	243	213	195	180	500	400	315	400
	3RT1 075	400	324	284	260	240	630	500	400	450
	3RT1 076	--	400	355	325	300	630	500	500	450
	3TF6 8	--	--	400	400	400	800	500	630	450

Overload relay	Contactor	Rated operating current I_e AC-3 in A with 400 V and Class ...					Type of coordination ²⁾				
856-3DA00											
Operating range 125 to 500 A											
3UF1 857-3EA00	3RT1 066	300	243	213	195	180	500	400	315	400	
	3RT1 075	400	324	284	260	240	800	500	400	450	
	3RT1 076	500	405	355	325	300	800	500	500	450	
	3TF6 8	--	500	500	479	441	800	500	630	450	
	3TF6 9	--	--	--	500	500	800	500	630	450	
Operating range 160 to 630 A											
3UF1 868-3FA00	3RT1 075	400	324	284	260	240	800	500	400	450	
	3RT1 076	500	405	355	325	300	800	500	500	450	
	3TF6 8	630	630	536	479	441	1000	500	630	450	
	3TF6 9	--	--	--	531	500	1000	500	630	450	
Operating range 200 to 820 A											
3UF1 869-3GA00	3TF6 8	630	630	536	479	441	1000	500	630	450	
	3TF6 9	820	662	572	531	500	1000	500	630	450	

1) Please observe operating voltage.

2) Assignment and short-circuit protective devices acc. to IEC 60947-4-1:

- Type of coordination 1:
Contactors or starters must not endanger persons or equipment in the event of a short-circuit. They do not have to be suitable for further operation without repair and the renewal of parts.
- Type of coordination 2:
Contactors or starters must not endanger persons or equipment in the event of a short-circuit. These must be suitable for

subsequent operation. There is a risk of contact welding.

3) Voltage tolerance +5 %.

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